UK NEQAS
Leucocyte Immunophenotyping

Sheffield Teaching Hospitals NHS
NHS Foundation Trust

Leukaemia Immunophenotyping (Part 1) Programme

Sample - 151601

All Participant Report

Distribution - 151601 Closing Date - 19 June 2015 Participant ID - 42981

Date Issued - 01 June 2015

Trial Comments

This sample was issued to 283 participants in the LI programme.

Sample Comments

The sample was manufactured by UK NEQAS using a sample of blood from a leukaemia patient which was stabilised and added to a stabilised unit of whole blood.

Results and Performance

Overall Performance Grade (Core Antigens Only)	Performance Status for this Sample	Performance Status Classification Over 6 Sample Period	
		Satisfactory (Grades A-C)	Critical (Grades D-G)
A	Satisfactory	5	1

Please note performance monitoring for this programme is semi-qualitative and is based on the overall performance grade obtained from the consensus immunophenotype on the core antigens. The robust statistics and z-scores provided below are related to technical performance on individual antigens and are not used for performance monitoring. Derivation of z-scores requires normally distributed data and the results for this programme vary between normal and abnormal distribution based on the antigens and on a sample to sample basis. Therefore z-scores for antigens with expressions at the extremes of the results scale (around 0% and 100%) may not truly reflect the performance of the antigen and all z-scores should be viewed as for information purposes only.

Antigen	Your Results (%)	Your Result Antigen Expression (Positive/Negative)	Consensus Antigen Expression (Positive/Negative)	Robust Mean (%)	Robust SD (%)
CD2	40.00	+	+	97.65	1.91
CD3	100.00	+	+	98.10	1.64
CD5	100.00	+	+	98.06	1.67
CD13	0.00	-	-	0.00	0.00
CD19	0.00	-	-	0.30	0.34
CD20	0.00	-	-	0.23	0.26
CD10	0.00	-	-	0.00	0.00
CD4	100.00	+	+	97.02	2.51
CD7	100.00	+	+	96.92	2.53
CD8	0.00	-	-	1.14	0.98
CD45	100.00	+	+	100.00	0.00
CD34	0.00	-	-	0.00	0.00
HLADR	0.00	-	-	1.11	1.17
CD1a	0.00	-	-	0.00	0.00
TDT			-	0.00	0.00
CD25			-	4.79	5.37
CD56			-	0.77	0.81
CD38			+	40.69	35.39
TCR ab			+	97.48	2.77
TCR gd			-	0.00	0.00

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Leukaemia Immunophenotyping (Part 1) Programme

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Antigen	z Score*	Performance Status for this Sample	Performance Status Classification Over 6 Sample Period		
			Satisfactory	Action	Critical
CD2	-30.18	Critical	0	1	1
CD3	1.16	Satisfactory	1	1	0
CD5	1.16	Satisfactory	1	1	0
CD13	0.00	Satisfactory	1	1	0
CD19	-0.88	Satisfactory	1	1	0
CD20	-0.88	Satisfactory	1	1	0
CD10	0.00	Satisfactory			
CD4	1.19	Satisfactory			
CD7	1.22	Satisfactory			
CD8	-1.16	Satisfactory			
CD45		Action			
CD34	0.00	Satisfactory			
HLADR	-0.95	Satisfactory			
CD1a	0.00	Satisfactory			
TDT		Action			
CD25		Action			
CD56		Action			
CD38		Action			
TCR ab		Action			
TCR gd		Action			

***z Score Limits Definitions**

Please note the scale below is applicable to the tables above and to the z score histograms and Shewhart control charts that follow. It is not applicable to the Cusum control charts.

Leukaemia Immunophenotyping (Part 1) Programme

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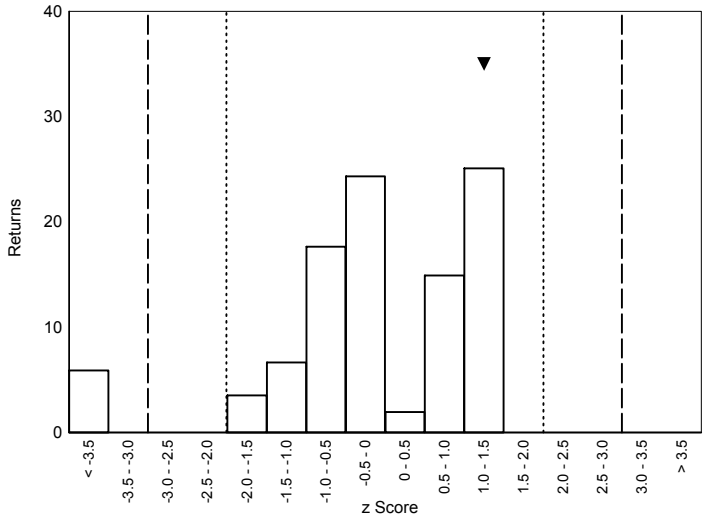
Histograms of Participant z Scores

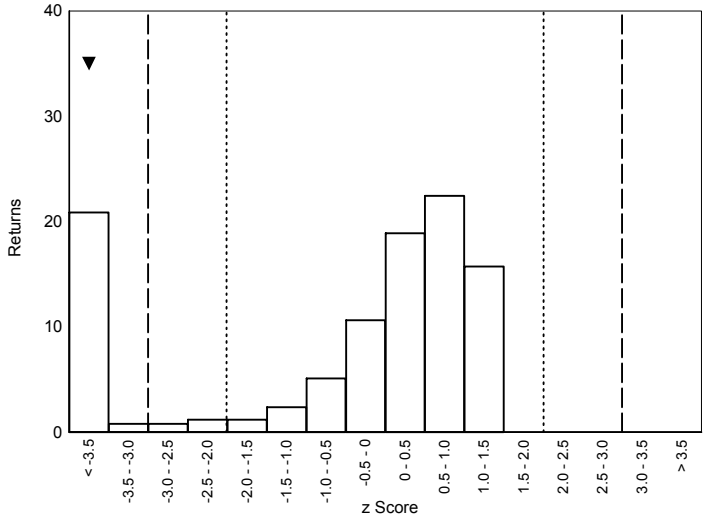
Percentage Values (%) - CD3

Please note ▼ denotes your result



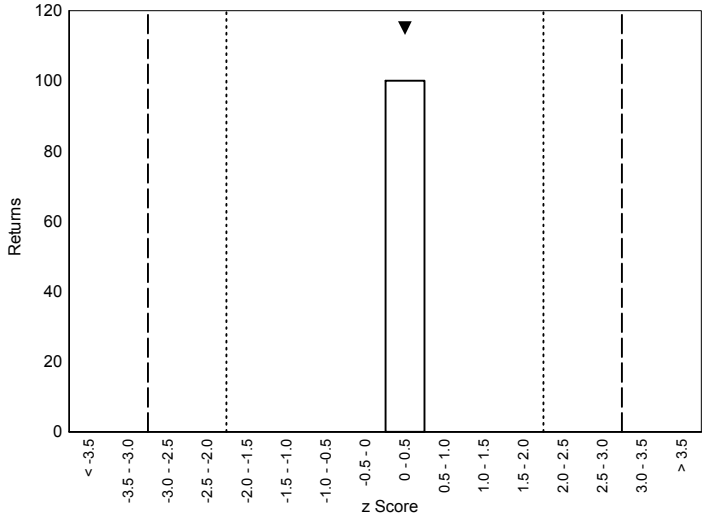
Percentage Values (%) - CD2

Please note ▼ denotes your result



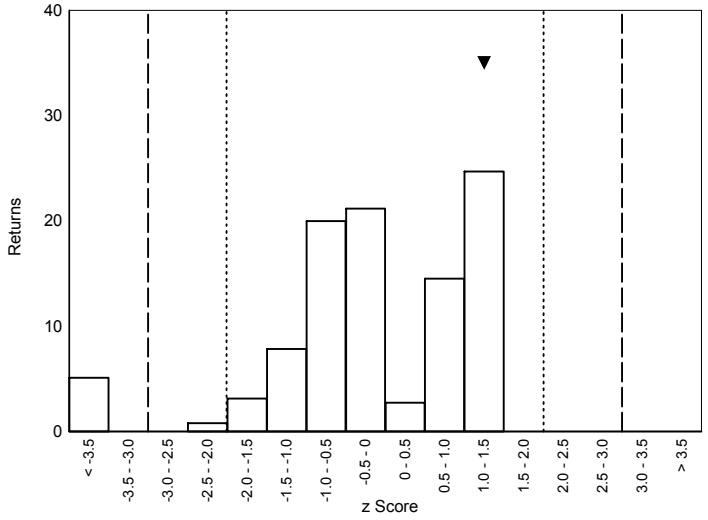
Percentage Values (%) - CD13

Please note ▼ denotes your result



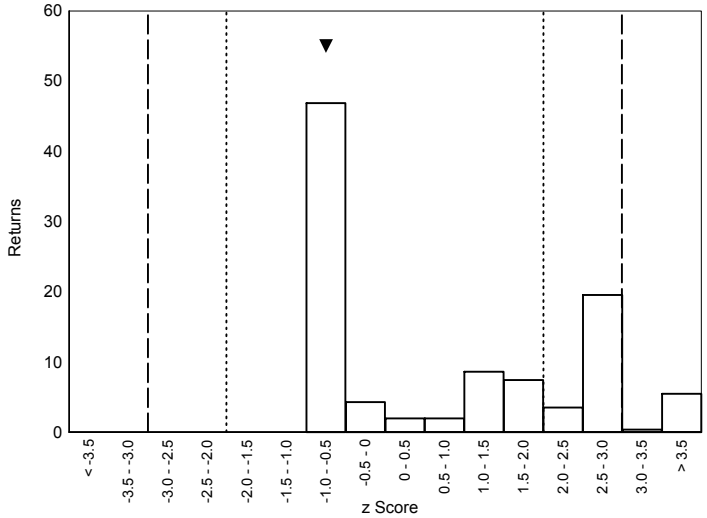
Percentage Values (%) - CD5

Please note ▼ denotes your result



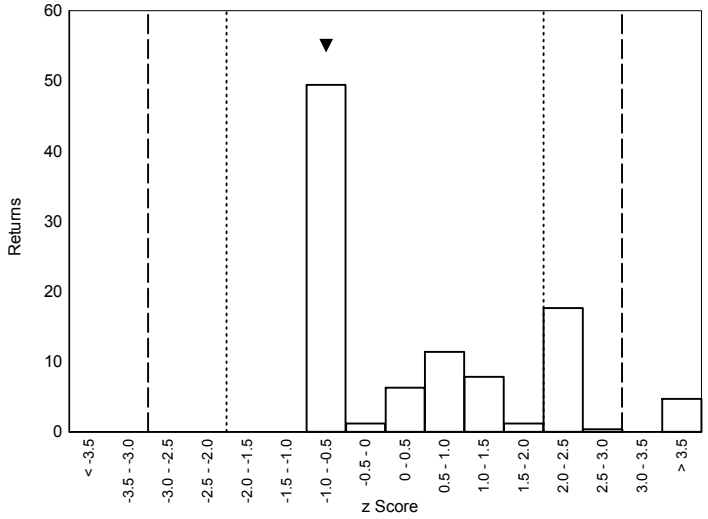
Percentage Values (%) - CD20

Please note ▼ denotes your result



Percentage Values (%) - CD19

Please note ▼ denotes your result



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Leukaemia Immunophenotyping (Part 1) Programme

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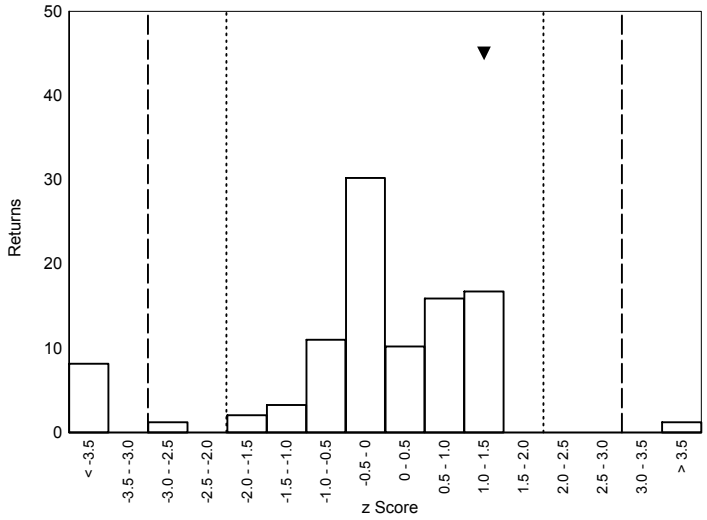
Histograms of Participant z Scores

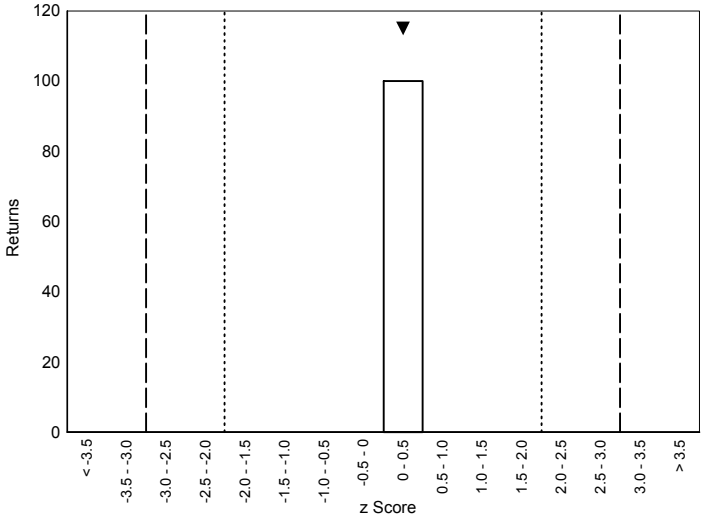
Percentage Values (%) - CD4

Please note ▼ denotes your result



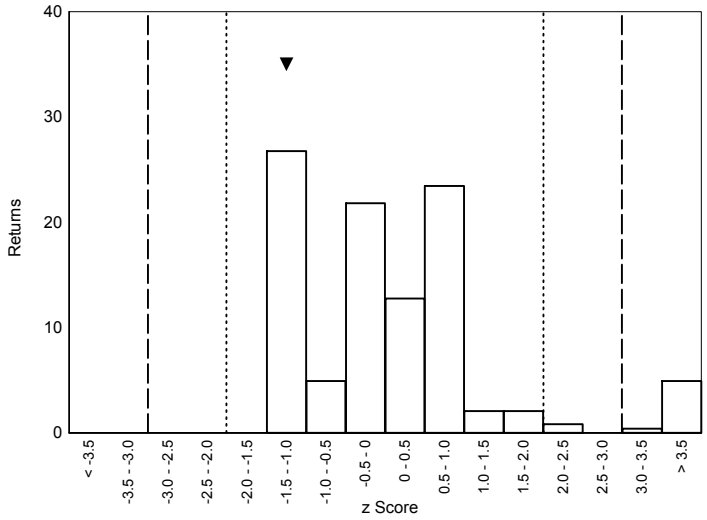
Percentage Values (%) - CD10

Please note ▼ denotes your result



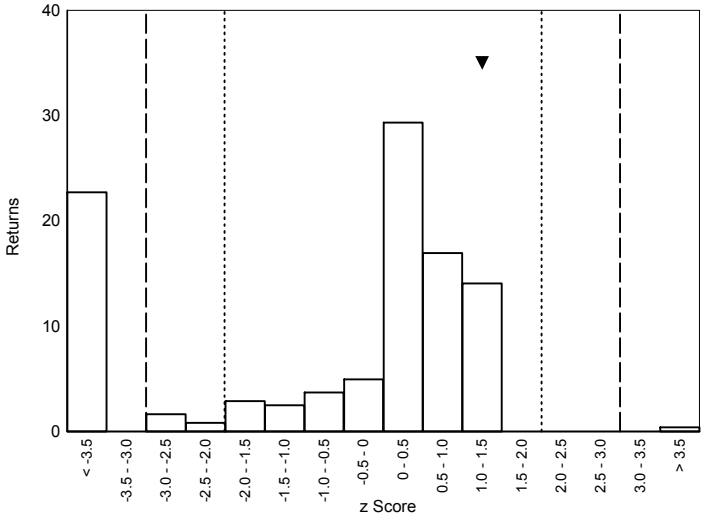
Percentage Values (%) - CD8

Please note ▼ denotes your result



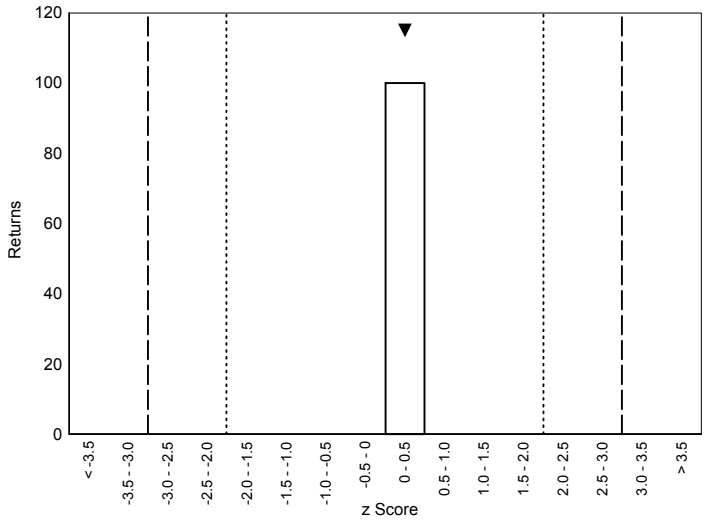
Percentage Values (%) - CD7

Please note ▼ denotes your result



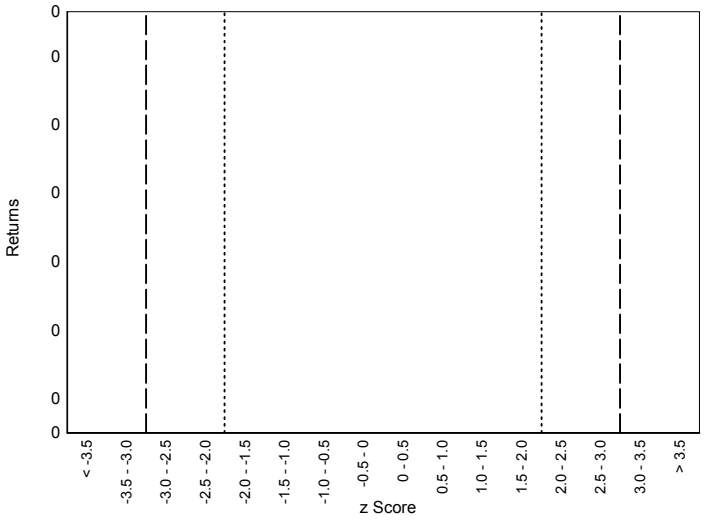
Percentage Values (%) - CD34

Please note ▼ denotes your result



Percentage Values (%) - CD45

Please note ▼ denotes your result



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Leukaemia Immunophenotyping (Part 1) Programme

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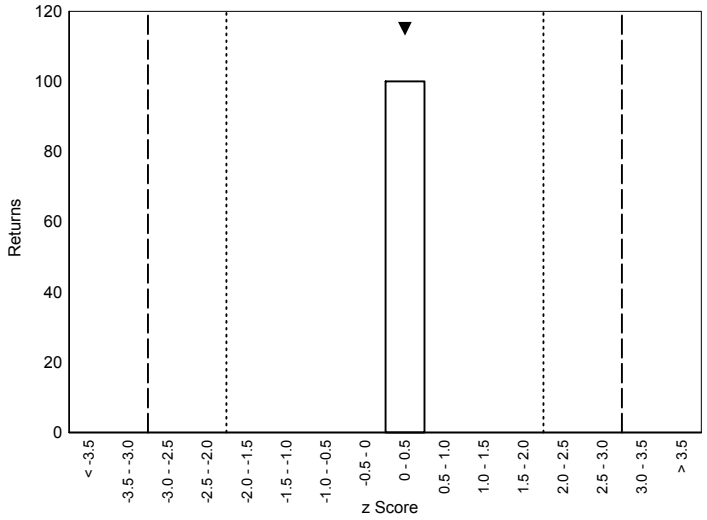
Histograms of Participant z Scores

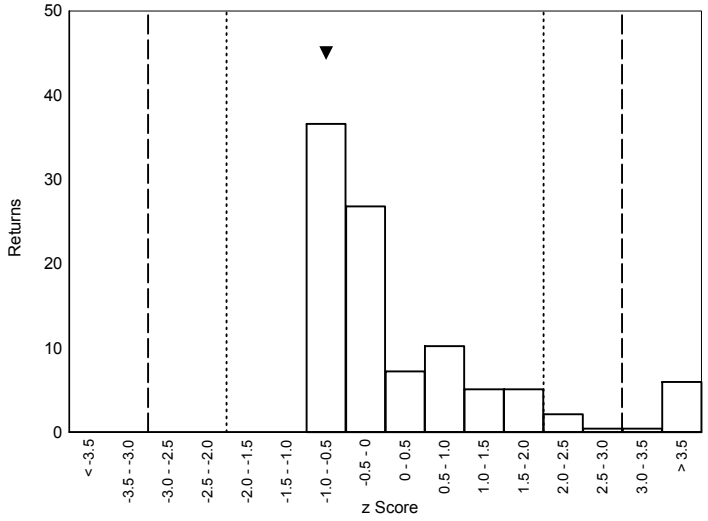
Percentage Values (%) - CD1a

Please note ▼ denotes your result



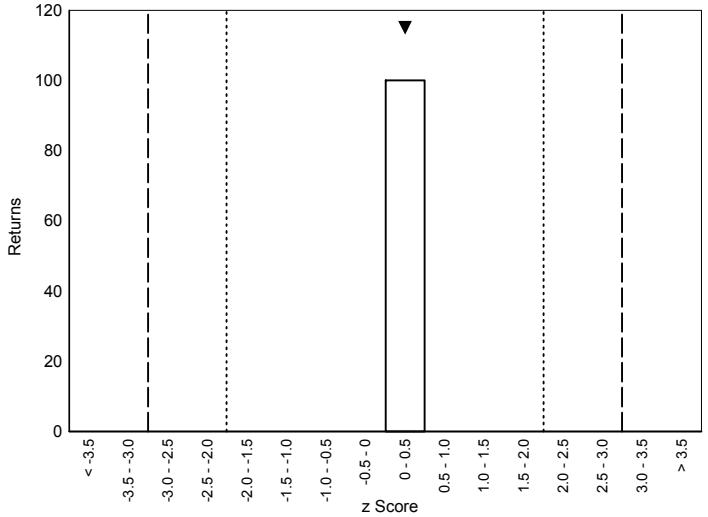
Percentage Values (%) - HLADR

Please note ▼ denotes your result



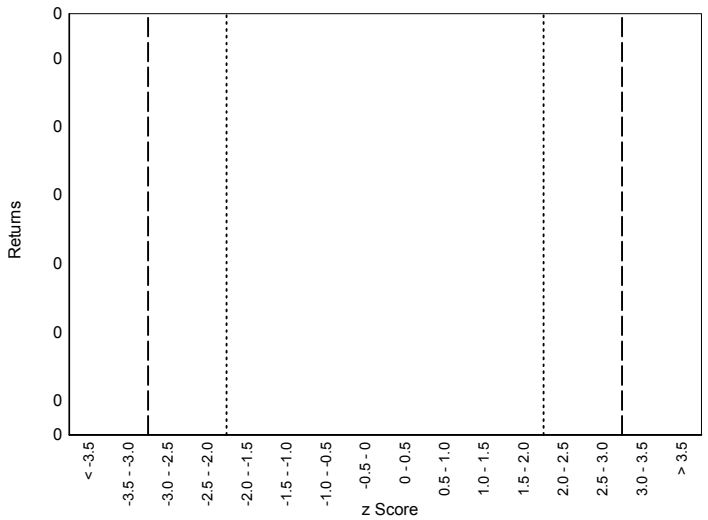
Percentage Values (%) - Myeloperox

Please note ▼ denotes your result



Percentage Values (%) - Cyto CD3

Please note ▼ denotes your result



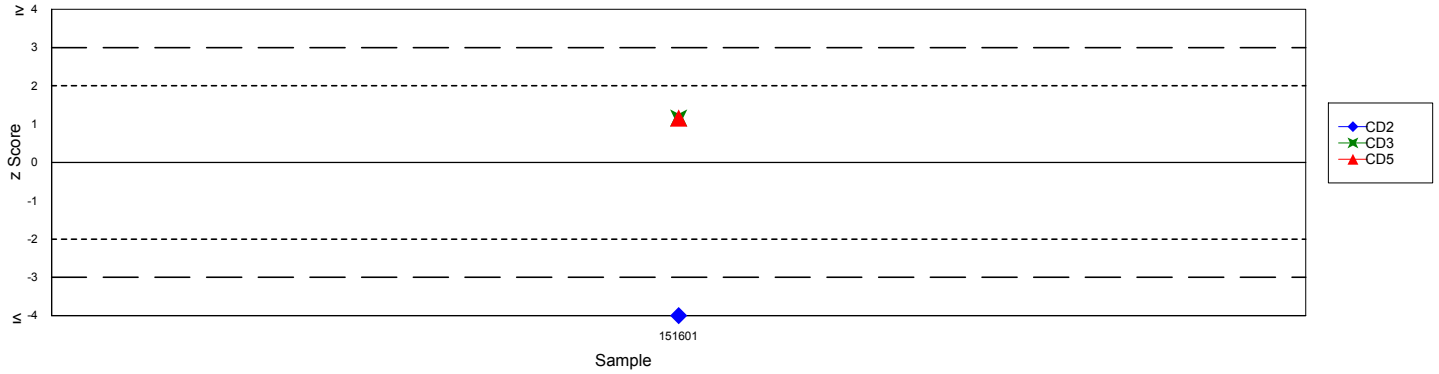
Leukaemia Immunophenotyping (Part 1) Programme

Sample - 151601

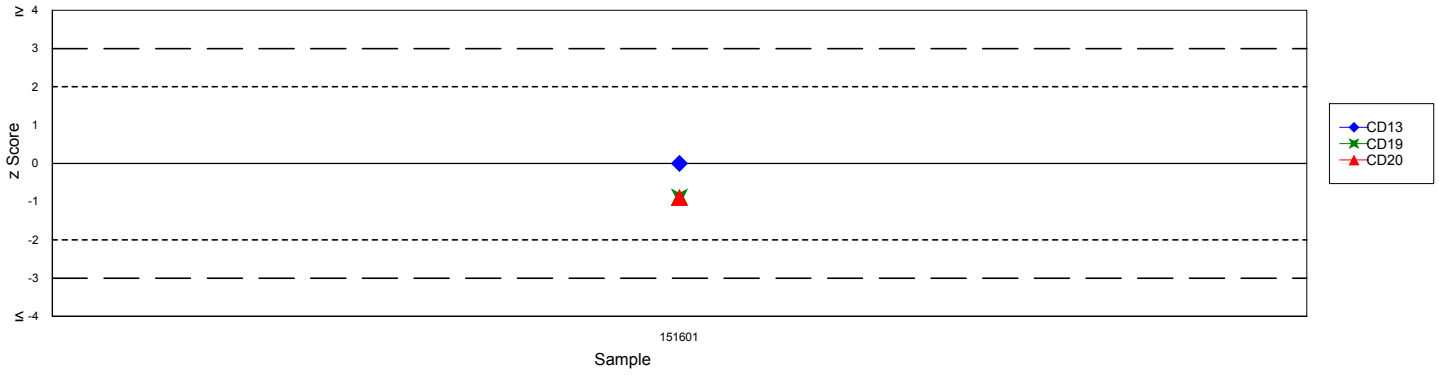
Shewhart Control Charts

(Please note each data point represents a single sample)

Percentage Values (%)



Percentage Values (%)



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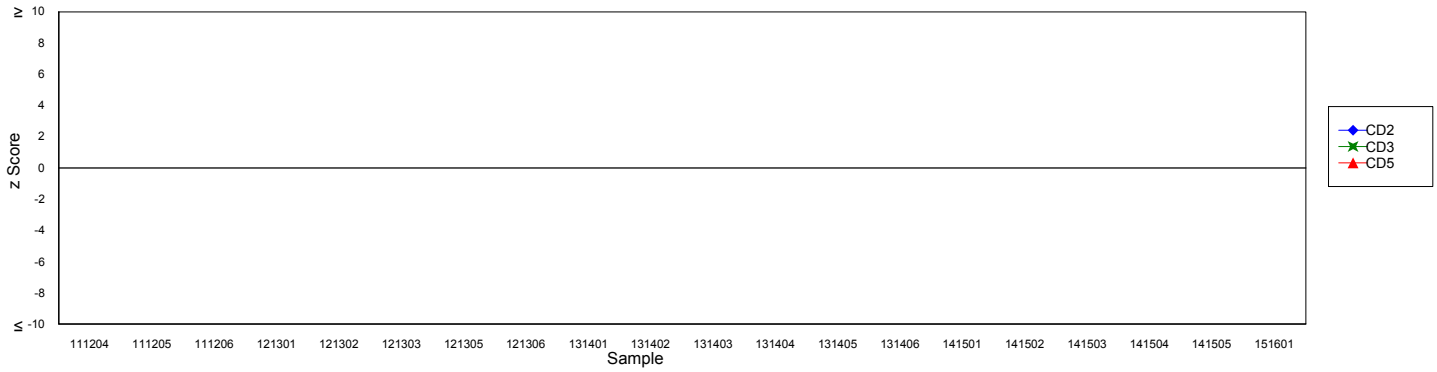
Leukaemia Immunophenotyping (Part 1) Programme

Sample - 151601

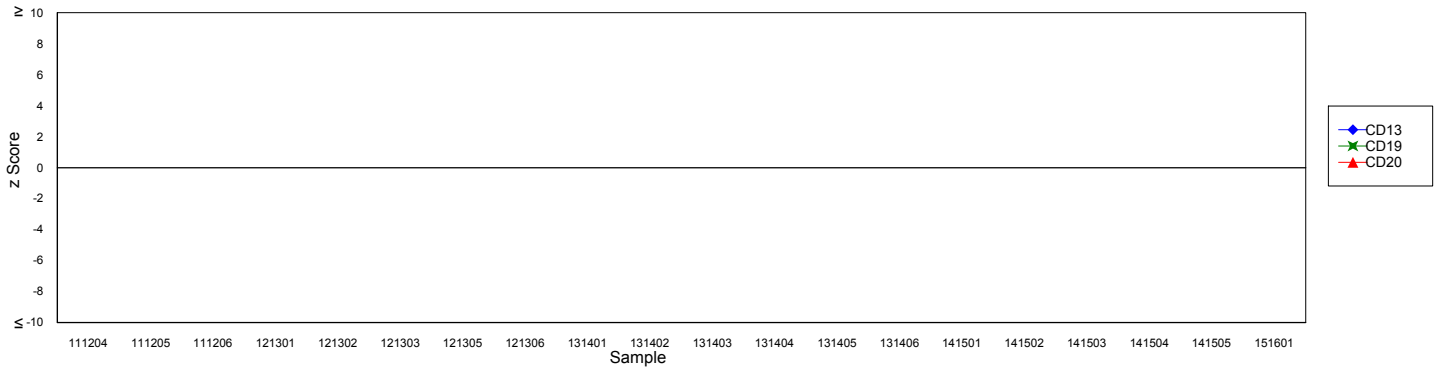
Cusum Control Charts

(Please note each data point represents the sum of the z scores of the current sample and the two previous samples)

Percentage Values (%)



Percentage Values (%)



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Leukaemia Immunophenotyping (Part 1) Programme

Sample - 151601

Antibody Manufacturer Specific Statistics

(Please note only groups of >20 returns are displayed)

CD2

Method	Percentage Values (%) Returns	Robust Mean	Robust SD
BD Biosciences	134	97.7	1.7
Beckman Coulter	86	97.8	1.9

CD3

Method	Percentage Values (%) Returns	Robust Mean	Robust SD
BD Biosciences	146	98.2	1.6
Beckman Coulter	80	97.9	1.7

CD5

Method	Percentage Values (%) Returns	Robust Mean	Robust SD
BD Biosciences	144	98.1	1.6
Beckman Coulter	83	98.0	1.7

CD10

Method	Percentage Values (%) Returns	Robust Mean	Robust SD
BD Biosciences	124	0.0	0.0
Beckman Coulter	90	0.0	0.0

CD13

Method	Percentage Values (%) Returns	Robust Mean	Robust SD
BD Biosciences	142	0.0	0.0
Beckman Coulter	80	0.0	0.0

CD19

Method	Percentage Values (%) Returns	Robust Mean	Robust SD
BD Biosciences	123	0.4	0.5
Beckman Coulter	102	0.2	0.2

CD4

Method	Percentage Values (%) Returns	Robust Mean	Robust SD
BD Biosciences	129	97.1	2.2
Beckman Coulter	83	96.9	2.9

Leukaemia Immunophenotyping (Part 1) Programme

Sample - 151601

Antibody Manufacturer Specific Statistics

(Please note only groups of >20 returns are displayed)

CD7	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	124	97.1	2.8
Beckman Coulter	83	96.2	3.1

CD8	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	127	1.1	0.9
Beckman Coulter	87	1.2	1.0

CD45	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	131	100.0	0.0
Beckman Coulter	78	100.0	0.0

CD34	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	148	0.0	0.0
Beckman Coulter	76	0.0	0.0

HLADR	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	131	1.1	1.1
Beckman Coulter	70	1.2	1.2

CD20	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	139	0.4	0.5
Beckman Coulter	80	0.0	0.0

CD1a	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	100	0.0	0.0
Beckman Coulter	51	0.0	0.0

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Leukaemia Immunophenotyping (Part 1) Programme

Sample - 151601

Antibody Manufacturer Specific Statistics

(Please note only groups of >20 returns are displayed)

CD56	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	24	0.6	0.7

TCR gd	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
BD Biosciences	20	0.0	0.0

Sheffield Teaching Hospitals NHS Foundation Trust, a UKAS proficiency testing provider No. 7804, operating UK NEQAS for Leucocyte Immunophenotyping.

Leukaemia Immunophenotyping (Part 1) Programme

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Antibody Fluorochrome Specific Statistics

(Please note only groups of >20 returns are displayed)

CD2	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	30	97.9	1.7
FITC	98	97.7	1.8
PE	55	98.1	1.7
PE-CY7	51	93.5	6.1

CD3	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
Alexa 750	21	98.7	1.5
APC	39	98.3	1.6
FITC	44	98.0	1.6
PerCP-CY5.5	25	97.9	1.7

CD5	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	47	98.2	1.4
FITC	59	97.6	1.6
PE	37	97.8	1.8
PE-CY7	34	97.9	2.0
PerCP-CY5.5	32	98.9	1.3

CD10	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	38	0.0	0.0
FITC	37	0.0	0.0
PE	104	0.0	0.0
PE-CY7	42	0.0	0.0

CD13	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
PE	171	0.0	0.0
PE-CY7	22	0.0	0.0

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Leukaemia Immunophenotyping (Part 1) Programme

Sample - 151601

Antibody Fluorochrome Specific Statistics

(Please note only groups of >20 returns are displayed)

CD19	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	37	0.5	0.5
ECD	26	0.5	0.6
PE	34	0.3	0.4
PE-CY7	77	0.0	0.0
PerCP-CY5.5	22	0.3	0.3

TDT	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
FITC	20	0.0	0.0

CD4	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	36	97.1	2.5
FITC	62	96.8	2.3
PE	53	97.2	2.3
PE-CY7	24	96.5	1.7

CD7	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	21	98.3	1.6
FITC	93	95.6	4.4
PE	78	97.6	1.5

CD8	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	24	1.5	0.6
ECD	20	1.6	0.7
FITC	49	0.8	0.9
PE	62	1.1	1.0
PE-CY7	25	1.3	0.8

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Leukaemia Immunophenotyping (Part 1) Programme

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Antibody Fluorochrome Specific Statistics

(Please note only groups of >20 returns are displayed)

CD45	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC-Cy7	22	100.0	0.0
APC-H7	29	100.0	0.0
PerCP	32	100.0	0.0
V450	32	100.0	0.0

CD34	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	43	0.0	0.0
PE	59	0.0	0.0
PE-CY7	36	0.0	0.0
PerCP-CY5.5	29	0.0	0.0

HLADR	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
FITC	98	1.0	1.1
PC5.5	21	0.9	1.2

CD20	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	28	0.0	0.0
FITC	65	0.5	0.5
Pacific Orange	20	0.0	0.0
PC5.5	27	0.0	0.0
PE	27	0.2	0.2

CD1a	Percentage Values (%)		
Method	Returns	Robust Mean	Robust SD
APC	41	0.0	0.0
FITC	34	0.0	0.0
PE	109	0.0	0.0

Information with respect to compliance with standards BS EN ISO/IEC 17043:2010

4.8.2 a) The proficiency testing provider for this programme is:
UK NEQAS for Leucocyte Immunophenotyping
Pegasus House, 4th Floor Suite
463A Glossop Road
Sheffield, S10 2QD
United Kingdom
Tel: +44 (0) 114 267 3600, Fax: +44 (0) 114 267 3601
e-mail: admin@ukneqasli.co.uk

4.8.2 b) The coordinators of UK NEQAS LI programmes are Prof. David Barnett and Mr Liam Whitby.

4.8.2 c) Person(s) authorizing this report:
Prof. David Barnett, Director or Mr Liam Whitby, Operations Manager of UK NEQAS LI

4.8.2 d) No activities in relation to this EQA exercise were subcontracted.

4.8.2 g) The UK NEQAS LI Confidentiality Policy can be found in the Quality Manual which is available by contacting the UK NEQAS LI office. Participant details, their results and their performance data remain confidential unless revealed to the relevant NQAAP when a UK participant is identified as having performance issues.

4.8.2 i) All EQA samples are prepared in accordance with strict Standard Operational Procedures by trained personnel proven to ensure homogeneity and stability. Where appropriate/possible EQA samples are tested prior to issue. Where the sample(s) issued is stabilised blood or platelets, pre and post stability testing will have proved sample suitability prior to issue.

4.8.2 l), n), o), r) & s) Please refer to the UK NEQAS LI website at www.ukneqasli.co.uk for detailed information on each programme including the scoring systems applied to assess performance. Where a scoring system refers to the 'consensus result' this means the result reported by the majority of participants for that trial issue. Advice on the interpretation of statistical analyses and the criteria on which performance is measured is also given. Please note that where different methods/procedures are used by different groups of participants these may be displayed within your report, but the same scoring system is applied to all participants irrespective of method/procedure used.

4.8.2 m) We do not assign values against reference materials or calibrants.

4.8.2 q) Details of the programme designs as authorized by The Steering Committee and Specialist Advisory Group can be found on our website at www.ukneqasli.co.uk. The proposed trial issue schedule for each programme is also available.

4.8.2 t) If you would like to discuss the outcomes of this trial issue, please contact UK NEQAS LI using the contact details provided.